Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18 (Canceled)

19. (Currently Amended) A compensation process for a network comprising:

evaluating variations in amplifier gain over a selected range of wavelengths;

establishing an inverse function of the gain variations;

predetermining an output parameter of an optical transmitter in accordance with a corresponding value of the inverse function on a per wavelength basis including predetermining an output parameter for each one of a plurality of optical transmitters in accordance with a corresponding value of the inverse function selected from a plurality of corresponding wavelengths;

providing a plurality of lasers as optical transmitters;

setting a power output parameter for each member of the plurality of lasers in accordance with a corresponding value of the inverse function and ~~A process as in claim 17~~ which includes providing pre-set laser modules for installation in a network where the number of optical spans between a module and a respective receiver is not larger than a predetermined exponent.

20. (Original) A process as in claim 19 wherein the laser modules each have substantially the same power output profile.

21-24 (canceled)

25. (Currently Amended) An optical network comprising:

a plurality of optical links;

a plurality of amplifiers coupled to respective links wherein at least some of the amplifiers exhibit common gain profiles;

a plurality of optical transmitters coupled to an input of a selected link; and

pre-emphasis adjustment circuitry coupled to the members of the plurality of transmitters whereby each transmitter's output power is predetermined in accordance with an inverse of the gain profile raised to a predetermined exponent wherein the pre-emphasis circuitry sets each transmitters' output power in accordance with the inverse gain profile, and

which includes an optical receiver coupled to an output of a respective optical link wherein less than S optical links extend between the plurality of transmitters and the receiver and wherein *S* does not exceed the value of the exponent,

the receiver has an input sensitivity range on the order of 2S dB.

26-31 (Canceled)

32. (Previously Presented) An optical system comprising:

a plurality of communications links;

a plurality of add/drop elements between various members of the plurality of links, each of the elements including a pre-amplifier, the pre-amplifier having a common predetermined input range;

at least one pre-set pre-emphasis module located at one of the elements, the module establishes a predetermined gain profile, and couples a plurality of optical signals the gain of which is adjusted in accordance with the predetermined profile, to an input of one of the links associated with the one element, the module being usable to limit incoming optical signals to the predetermined input range when used with up to a predetermined number of optical links determined, at least in part, by the common input range.

33. (Previously Presented) A system as in claim 32 which includes a plurality of substantially identical, pre-set pre-emphasis modules.

34 (Previously Presented) A system as in claim 32 where the elements include at least one output amplifier with the pre-amplifier having a first common gain profile and the output amplifiers having a second common gain profile.

35. (Previously Presented) A system as in claim 34 where the pre-emphasis modules each incorporate channel based gain characteristics in accordance with an inverse of at least one of the common gain profiles.

36. (Previously Presented) A system as in claim 35 where the gain characteristics are in accordance with an inverse of both of the common gain profiles.

37. (Previously Presented) A system as in claim 34 where the gain characteristics of the modules are in accordance with an inverse of at least one of the common gain profiles raised to the predetermined number of optical links.